

Measured ATCA Backplane Channels

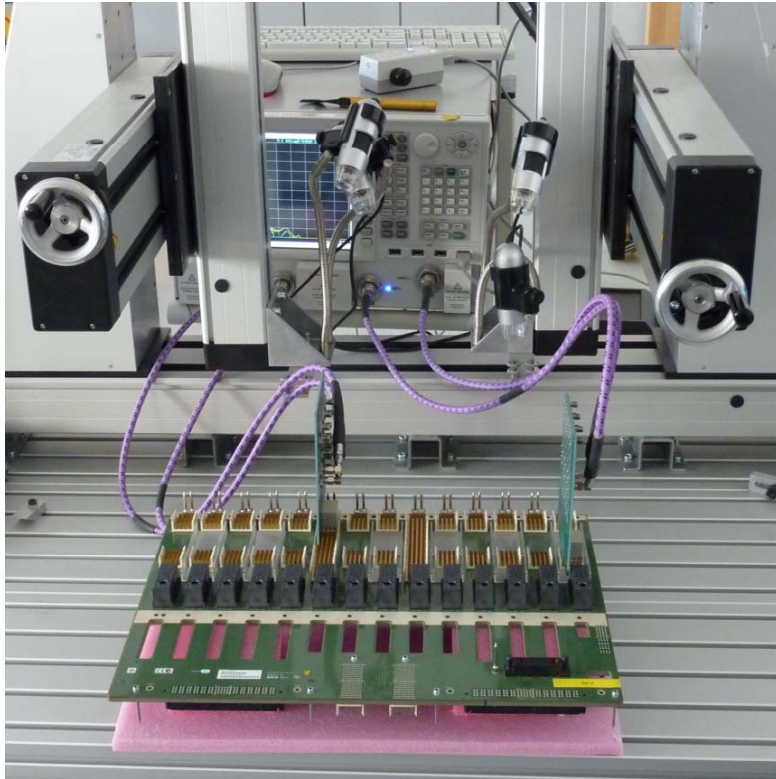
SEP/20/11

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Measurement Setup



- **Document History**

- AUG/16/11 - Initial Version
- SEP/20/11 - Crosstalk Files with termination

- **Agilent N5242A**

- Port 1 -> Tx+
- Port 2 -> Rx+
- Port 3 -> Tx-
- Port 4 -> Rx-

- **BACKPLANE**

- C4440 Rev.B (8406883e61b)
- Nelco 4000-13SI, 22 Layer, 227 mil

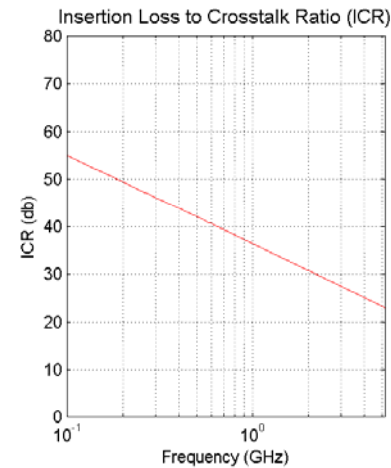
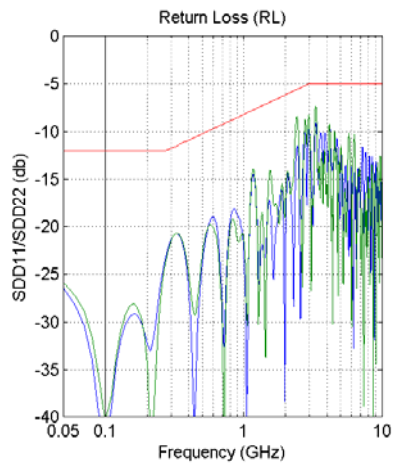
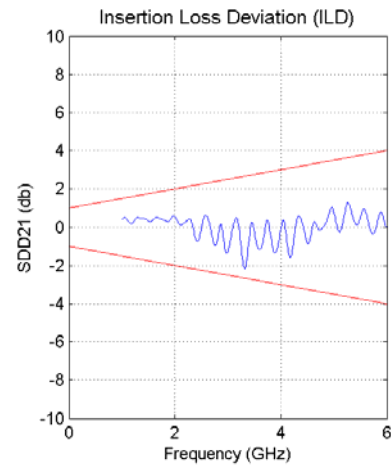
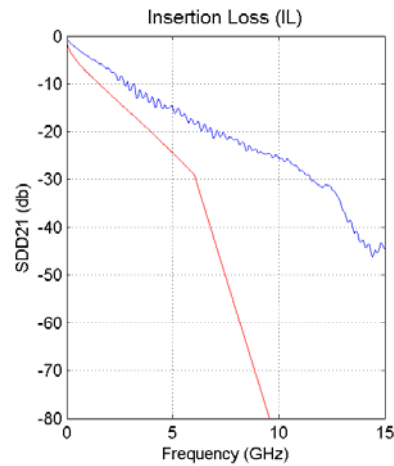
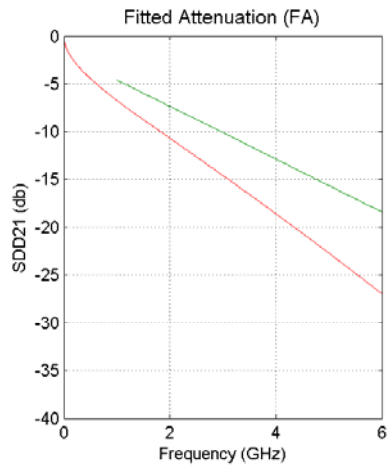
- **DAUGHTER CARD**

- Test-F140 ((6306855G)
- FR408, 16 Layer, 100mil
- Trace length ~ 6.2 inch
- Normal, High and Low Impedance
- Typical ATCA board topology
- ZDplus Backplane connector
- SMA Lunch for TP1 and TP4
- Receiver AC Capacitors

Longest Link

- **Channel Length**
 - Tx Daughter Card ~ 6.2 inch
 - Backplane ~ 10.5 inch
 - Rx Daughter Card ~ 6.2 inch
- **Thru and Crosstalk Files**
 - Thru_S14-P23-04-AB_S06-P20-10-CD_NNN.s4p
 - FEXT_S14-P23-03-AB_S06-P20-10-CD_NNN.s4p
 - NEXT_S06-P20-09-AB_S06-P20-10-CD_NNN.s4p
 - NEXT_S06-P20-09-EF_S06-P20-10-CD_NNN.s4p
 - NEXT_S06-P20-10-AB_S06-P20-10-CD_NNN.s4p
 - NEXT_S06-P20-10-EF_S06-P20-10-CD_NNN.s4p
- **Additional Thru Files**
 - Thru_S06-P20-10-AB_S14-P23-04-CD_NNN.s4p
 - Thru_S06-P20-10-EF_S14-P23-04-GH_NNN.s4p
 - Thru_S14-P23-04-EF_S06-P20-10-GH_NNN.s4p

Thru_S14-P23-04-AB_S06-P20-10-CD_NNN.s4p



10GBase-KR Compliancy Check
according 802.3ap/Draft3.1

Source File:
Thru_S14-P23-04-AB_S06-P20-10-CD_NNN.s4p

Margin:
FA = +2.14
IL = +1.35
ILD = +0.50
RLin = +4.16
RLout = +2.36
ICR = +0.00

Overall Check:
pass

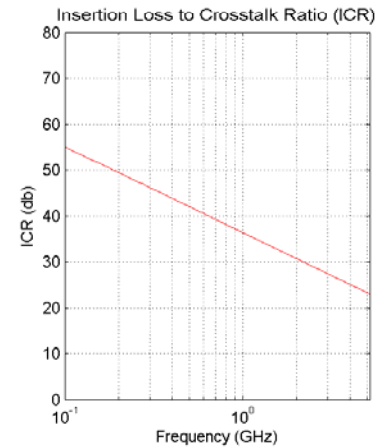
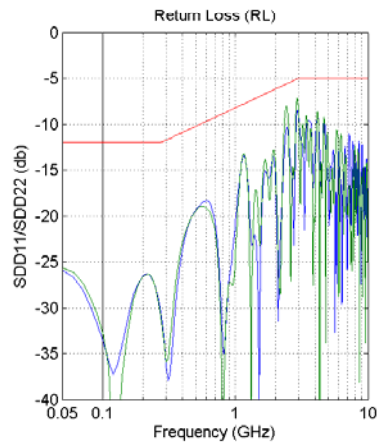
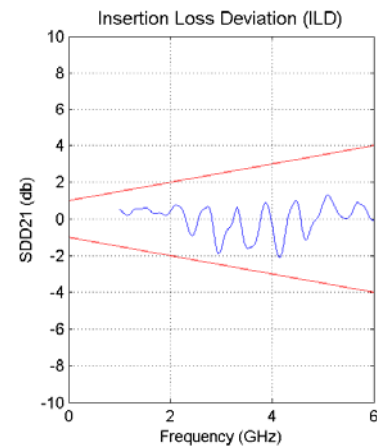
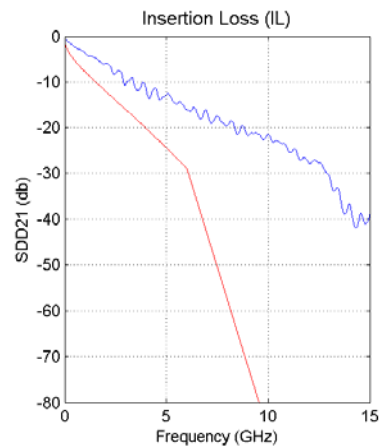
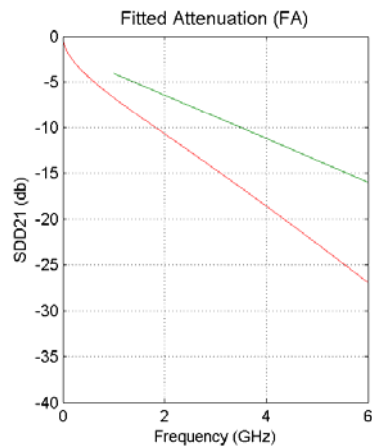
12-Aug-2011

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Middle Link

- **Channel Length**
 - Tx Daughter Card ~ 6.2 inch
 - Backplane 5.1 to 5.6 inch
 - Rx Daughter Card ~ 6.2 inch
- **Thru Files**
 - Thru_S10-P23-04-AB_S06-P22-06-CD_NNN.s4p
 - Thru_S06-P22-06-AB_S10-P23-04-CD_NNN.s4p
 - Thru_S06-P22-06-EF_S10-P23-04-GH_NNN.s4p
 - Thru_S10-P23-04-EF_S06-P22-06-GH_NNN.s4p

Thru_S10-P23-04-AB_S06-P22-06-CD_NNN.s4p



10GBase-KR Compliancy Check
according 802.3ap/Draft3.1

Source File:
Thru_S10-P23-04-AB_S06-P22-06-CD_NNN.s4p

Margin:
FA = +2.67
IL = +1.45
ILD = +0.59
RLin = +3.46
RLout = +2.10
ICR = +0.00

Overall Check:
pass

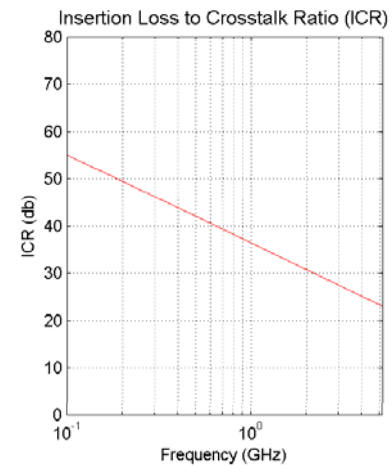
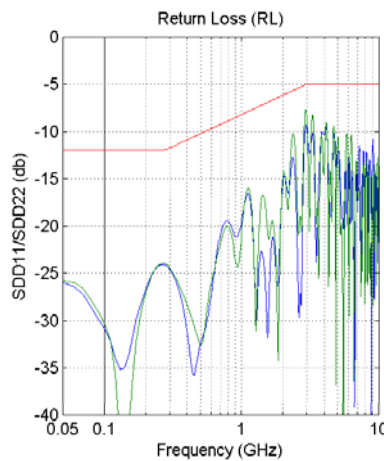
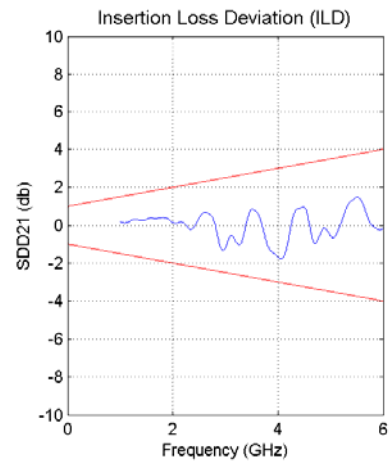
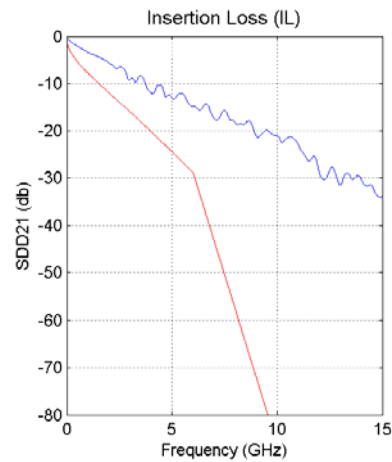
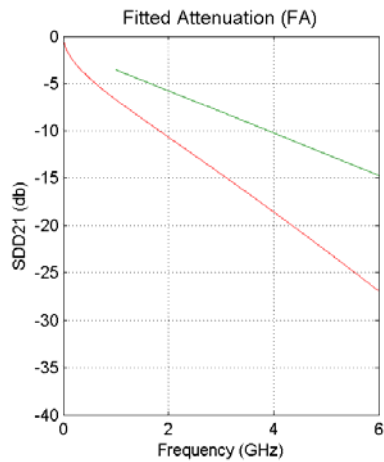
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Shortest Link

- **Channel Length**
 - Tx Daughter Card ~ 6.2 inch
 - Backplane 2.6 to 3.0 inch
 - Rx Daughter Card ~ 6.2 inch
- **Thru and Crosstalk Files**
 - Thru_S07-P23-02-AB_S09-P23-02-CD_NNN.s4p
 - FEXT_S07-P23-01-AB_S09-P23-02-CD_NNN.s4p
 - NEXT_S09-P23-01-AB_S09-P23-02-CD_NNN.s4p
 - NEXT_S09-P23-01-EF_S09-P23-02-CD_NNN.s4p
 - NEXT_S09-P23-02-AB_S09-P23-02-CD_NNN.s4p
 - NEXT_S09-P23-02-EF_S09-P23-02-CD_NNN.s4p
- **Additional Thru Files**
 - Thru_S09-P23-02-AB_S07-P23-02-CD_NNN.s4p
 - Thru_S09-P23-02-EF_S07-P23-02-GH_NNN.s4p
 - Thru_S07-P23-02-EF_S09-P23-02-GH_NNN.s4p

Thru_S07-P23-02-AB_S09-P23-02-CD_NNN.s4p



10GBase-KR Compliancy Check
according 802.3ap/Draft3.1

Source File:
Thru_S07-P23-02-AB_S09-P23-02-CD_NNN.s4p

Margin:
FA = +3.19
IL = +1.48
ILD = +1.14
RLin = +4.29
RLout = +2.64
ICR = +0.00

Overall Check:
pass

12-Aug-2011

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